OWNER'S MANUAL

ACOUSTIC ENERGY

aeg SYSTEM

SMART | ACTIVE | THEATRE

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Mains Power Safety Warnings

Ensure that your Aego-T Subwoofer is set to the appropriate mains input voltage before it is connected to a mains socket. The warranty does not cover damage caused by incorrect mains voltage. The grilles are designed to protect the drive units from damage and should not be removed.

Please read all operating and safety instructions before use retaining them for future reference. Adhere to all warnings on the product or in this manual.

Power sources — the subwoofer should be connected only to a power supply of the type described on its rear panel. If you are not sure consult your dealer or a qualified electrician.

Power cord — Power supply cords should be routed so as not to be walked on or caught under or against items.

If the mains plug is used as the disconnect device, the disconnect device shall remain readily operable.

Ventilation — To ensure reliable operation and to prevent the subwoofer from overheating ensure good ventilation. Do not cover the subwoofer and do not place it closer than 10cm from walls or soft furnishings. Do not use in a built-in installation unless proper ventilation is provided. Consult your dealer.

Water and moisture — The subwoofer should not be used near water, i.e. near a wash-bowl, basin, in a wet basement or swimming pool area.

Do not expose the apparatus to dripping or splashing and ensure that no objects filled with liquid such as vases are placed on the apparatus.

Temperature — The subwoofer may not function correctly at extremely low or freezing temperatures. The subwoofer should also be sited away from heat sources such as radiators or other electrical equipment that produces heat, including other amplifiers.

Electric shock — Care should be taken so that objects are not inserted into connectors or other apertures and that liquid does not spill into the enclosure. Never attempt to dismantle the subwoofer as serious electric shock might occur if the internal parts are touched.

Cleaning — Unplug the subwoofer from the wall power outlet before cleaning. Use only a clean, dry cloth. Do not use cleaners, liquids or solvent based preparations to clean the cabinet.

Smells — If an abnormal smell or smoke is detected, immediately turn the power off and unplug the subwoofer from the wall power outlet.

1. Introduction

Welcome to Aego-T. Perhaps more than any other audio-visual product, speakers are sensitive to installation so please take a little time to read this manual and to follow, as far as practical, the installation guidelines it contains. Careful installation will help ensure that your Aego-T system performs optimally. Should you have any questions not covered here we are happy to try and answer them either by telephone or email. Contact information can be found in Section 11.

Following this introduction, the Manual is divided into sections covering Handling, Installation and Positioning, Wall Brackets, Connections and Amplifiers, Controls and System Setup, Specifications, Warranty and Contact Information. We suggest that you read at least the first six sections carefully before installing and using your Aego-T system. We would also draw your attention to the **Mains Power Safety Warnings** on this page.

Finally, please enjoy your Aego-T system, but remember it is capable of generating high volume levels of low frequency sound, so please also be considerate of your neighbours.

2. Handling

Aego-T comprises relatively delicate precision engineered items that can be damaged by inappropriate handling. They are also heavy and in the case of the subwoofer large. Please take great care therefore when unpacking, moving and installing them. Please take care when unpacking or moving the speakers not to touch any of the drivers beneath the fabric grilles. Damage to a driver will at best degrade performance and at worst result in failure.

The enclosure surfaces should also be handled sympathetically. Any cleaning should only require a soft cloth, slightly dampened if necessary. Be wary of using any polishes or solvent based cleaning agents.

The packaging should be retained for future use if possible or appropriately re-cycled.

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3. Installation and Positioning

Aego-T is a satellite and subwoofer loudspeaker system designed to be used in domestic audio and audio-visual (home theatre) systems. It comprises a compact passive satellite speaker and an active (powered) subwoofer. The satellite speakers may be used either placed on furniture or wall-mounted using the included brackets. The subwoofer should be used placed on the floor. Use of the satellite wall-brackets is described in Section 4.

Aego-T satellites need to be connected to an external power amplifier - this might be a conventional hi-fi stereo amplifier or a multi-channel home theatre amplifier/processor. In either case it should have the facility to provide an appropriate line-level subwoofer output signal.

Aego-T systems comprising between two and seven satellites speakers may be installed with one subwoofer. Systems including more than seven satellite speakers should include multiple subwoofers.

To ensure that programme material is heard as intended it is important that each Aego-T element is located appropriately. For Aego-T systems comprising from two to seven satellites locate the speakers as described in the following paragraphs and refer to **Diagram One** over the page. Don't worry if it is not practical to follow the diagram exactly but experiment with the options that are practical in order to find the one that works best. Once your Aego-T system is connected and working (see Section 6), and you begin to become familiar with its performance, it is likely to be worthwhile experimenting a little further with positioning.

Two satellites only (Stereo System)

A stereo system is most likely to be used for conventional stereo audio only rather than audio-visual programme. In this case the satellites should be located near or on the wall facing the listening position and;

- Between 0.05 and 0.5 metres from the rear wall.
- 1.0 metres from side walls and clear of corners.
- Between 2.0 and 3.5 metres apart.
- Equidistant from and angled towards the listening position.

The location of the subwoofer is less critical but it should be placed a similar distance away from the listening position as the satellites. Try to avoid a location for the subwoofer exactly halfway along the length or width of the room.

Three satellites, one subwoofer (3.1 System)

A 3.1 system is most likely to be used for audio-visual (home theatre) programme. In this case the satellites should be located one either side of the screen, and one centrally either directly above or below the screen. The basic positioning guidelines for the left and right satellites are the same as for the 2.1 system described above. The central satellite may be positioned either on the wall, on a furniture unit or a screen stand.

The location of the subwoofer is less critical but it should be placed a similar distance away from the listening position as the satellites. Try to avoid a location for the subwoofer exactly halfway along the length or width of the room.

Five satellites, one subwoofer (5.1 System)

A 5.1 system is most likely to be used for audio-visual (home theatre) programme. In this case, three satellites should be located in front of listening position, one either side of the screen and one centrally, and two "surround" satellites located just behind the listening position one either side of the room. The front central satellite should be located either directly above or below the screen. The surround satellites may be located well above head height. The basic positioning guidelines for the left and right satellites are the same as for the 2.1 system described earlier. The central satellite may be positioned either on the wall, on a furniture unit or a screen stand.

The location of the subwoofer is less critical but it should be placed a similar distance away from the listening position as the satellites. Try to avoid a location for the subwoofer exactly halfway along the length or width of the room.

Seven satellites, one subwoofer (7.1 System)

A 7.1 system is most likely to be used for audio-visual (home theatre) programme. In this case, three satellites should be located in front of listening position, one either side of the screen and one centrally, two "surround" satellites just behind the listening position one either side of the room, and a two further surround satellites directly behind the listening position. The front central satellite should be located either directly above or below the screen. The surround satellites may be located well above head height. The basic positioning guidelines for the left and right satellites are the same as for the 2.1 system described earlier. The central satellite may be positioned either on the wall, on a furniture unit or a screen stand.

The location of the subwoofer is less critical but it should be placed a similar distance away from the listening position as the satellites. Try to avoid a location for the subwoofer exactly halfway along the length or width of the room.

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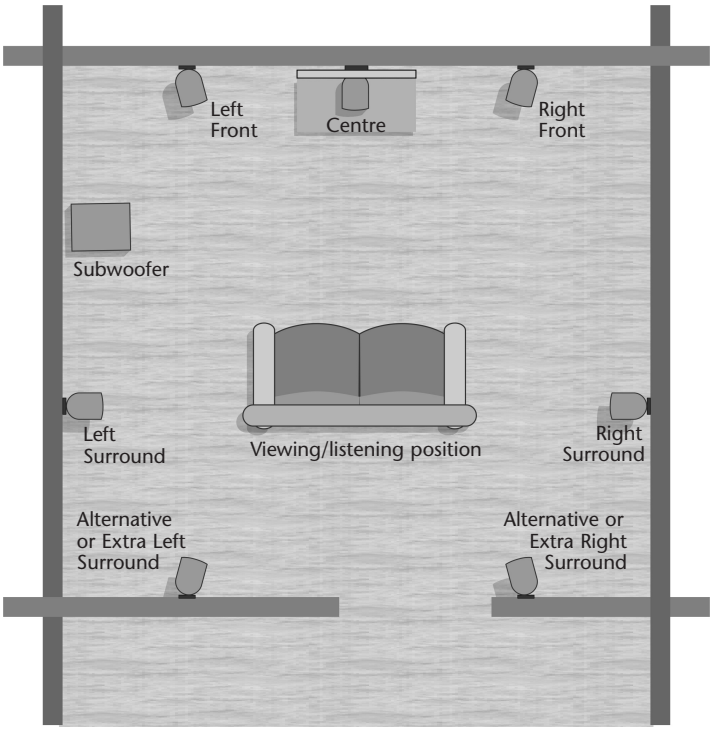
Diagram One



4. Wall Brackets

An adjustable wall bracket is supplied with each Aego-T satellite. To install the wall brackets proceed as described below and illustrated in **Diagram Two**.

Note: It is very important that wall brackets are fitted securely. If you are in any doubt about your ability to achieve a secure installation you should seek professional advice and assistance.

The wall bracket is held to the wall via two screws inserted through elongated holes in the bracket's **wall plate**. No.8 (4.5mm) round-head, rather than countersunk-head, screws should be used. The length of screw necessary and type of wall fitting required will depend on the construction and condition of the wall. If in any doubt seek professional advice.

Once the wall mounting locations for Aego-T satellites have been chosen use the wall brackets themselves as templates to mark the screw positions. Loosen the **bracket adjustment screw** using the allen key supplied and angle the **mounting post** away from the wall plate to gain easier access to the holes.

With the screw holes drilled and appropriate wall fittings inserted, securely screw the brackets to the wall and return the mounting post to the vertical.

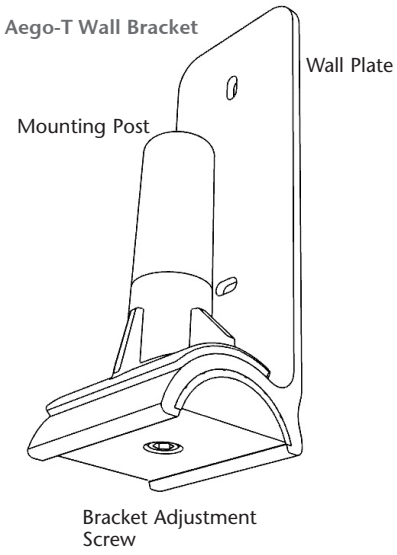
Note: The elongated bracket holes enable some adjustment for vertical alignment.

To attach an Aego-T satellite to a wall bracket simply place the satellite above the bracket and slide it onto the mounting post.

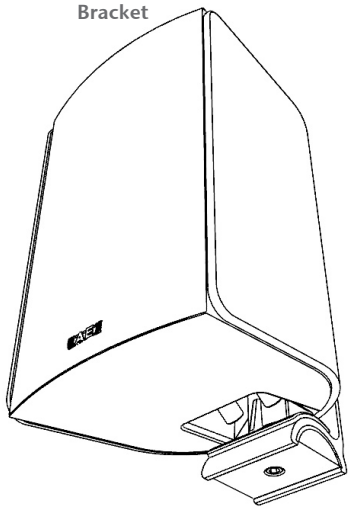
Note: Connecting cables to Aego-T satellites is best done before they are mounted on wall brackets. See Section 5.

Loosen the bracket adjustment screw to adjust the satellites vertical angle. Turn the satellite on the mounting post to adjust its lateral orientation.

Diagram Two



Aego-T Satellite and Wall Bracket



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5. Connections and Amplifiers

Satellite Connection

Connecting Aego-T satellites to an audio amplifier or audio-visual processor is fundamentally a simple process. If only two satellites are to be connected, identify the left and right speaker output terminals on the amplifier connection panel and connect one satellite to each. If three or more Aego-T satellites are to be used in a multi-channel home-theatre system with an audio-visual processor/amplifier, identify the appropriate output terminal for each channel (front left, centre, front right, etc) and connect a satellite to each.

Aego-T satellites are fitted with a pair of binding-post terminals intended to be used with stripped wires. Insert a stripped wire end through the cross-hole of each terminal and tighten the terminal sleeve. Take care when connecting cables not to touch the negative and positive terminals together. Make connections with all system electronics switched off.

It is important when connecting Aego-T satellites to ensure that each is connected with the same polarity. Positive speaker terminals should always be connected back to amplifier positive terminals, and negative speaker terminals connected back to amplifier negative terminals. Performance will be seriously degraded if connections are made with incorrect polarity.

Choice of cable type to connect Aego-T satellites will be influenced by the characteristics of other components in your hi-fi system and your dealer or distributor will be able to advise. Even so, there are some simple guidelines to consider:

- Cable runs to each speaker should be kept as short as possible consistent with each being of equal length.
- Short cable runs are especially important if the cable is of relatively small cross-sectional-area.
- If the cable is advertised as “directional” care should be taken to ensure that its orientation is as recommended.

Aego-T Satellite Amplifiers

The Aego-T satellite is a relatively high sensitivity speaker that does not require a generously rated power amplifier for adequate volume levels to be achieved in an average listening room. A minimum of 25 and maximum of 100 Watts into 8 Ohms per channel is recommended. Aego-T satellites also offer a relatively easy load to the amplifier and do not make unusually heavy demands on its power delivery.

No overload protection systems are fitted to Aego-T satellites so it is possible to cause damage through over-driving. Such damage can occur whatever the power rating of the amplifier and is not covered by any warranty. If ever the sound at high volumes becomes distorted your speakers are at risk of damage. In such circumstances the volume must be reduced.

Subwoofer Connection

The Aego-T subwoofer requires connection both to mains power and an appropriate subwoofer line-level output signal. The connection sockets are located on the back of the subwoofer. Leave the subwoofer switched-off at the mains until all connections are made and ensure that the subwoofer level control, also located on the connection panel is turned fully anti-clockwise.

Connect the subwoofer to the audio-visual processor subwoofer output using an appropriate RCA Phono connection cable. Ensure that the cable is of good quality.

After checking that the mains voltage selector on the subwoofer connection panel is set correctly, connect the subwoofer via its IEC mains input to a mains wall socket. Use only the mains cable supplied with the subwoofer.

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Subwoofer Controls

Accompanying the mains and signal input sockets on the subwoofer connection panel are a level control, an auto power switch and a phase reversal switch. Their function and use is described in the following paragraphs.

Subwoofer Level

The level control adjusts the volume of the subwoofer relative to the satellites. Begin with the level control set to around 50%. Detailed subwoofer level adjustment guidelines can be found below.

Subwoofer Phase

The phase switch reverses the subwoofer acoustic polarity. With the switch set to 0° the subwoofer output is in phase with the satellites. With the switch set to 180° the subwoofer output is out of phase with the satellites. Reversing the subwoofer phase can help optimise the sound of Aego-T satellite and subwoofer systems. Further subwoofer phase advice can be found below.

Subwoofer Auto Power

The subwoofer mains power switch incorporates an automatic switch-on/off function. With the switch set to "Auto" the subwoofer will switch on automatically when an audio signal is present. It will switch off again when no signal has been present for around 10 minutes. With "on" selected the subwoofer remains switched-on permanently.

System Setup

Before listening to your Aego-T system make one final check of the cables and connections. If all appears well begin listening at a relatively low volume to confirm that the system is operating as expected. Only increase the volume if you are happy that the sound at low volume is fundamentally as expected. If you are unhappy, turn the system off and re-check all the cables and connections.

Aego-T systems may take a little time to reach normal operating temperatures and to "run-in". Your ears too will take some time to adjust to the new sound, so it is unwise therefore to make rapid judgements about the performance of the system.

The most important aspect of Aego-T system setup is the integration of the satellites and subwoofer. Assuming the locations chosen for the satellites are satisfactory, adjusting the subwoofer's **location** in the room, its **volume level** and **phase**, and the subwoofer **filter frequency** selected on the audio-visual processor should enable a good end result to be achieved.

Select a few short examples of familiar programme material - both movie and music - to use while adjusting the setup. Listen also from a variety of different positions in the room. Check for balance and consistency of sound - neither too much nor too little bass across the range of programme material and listening positions. Experimentation and careful listening is the key to finding a good subwoofer setup.

Subwoofer Filter Frequency

The Aego-T satellite and subwoofer are designed to work together with a crossover frequency of 80Hz so the first setup parameter to adjust is to set the audio-visual processor's subwoofer filter frequency to this value. As you adjust other parameters you may find that moving the filter frequency a little, say 10Hz either way, is beneficial. Adjust other aspects of the setup, particularly subwoofer phase, before selecting a filter frequency higher than 90Hz or lower than 70Hz.

Note: Despite their small size, Aego-T satellites can handle and reproduce full range audio, so the audio-visual processor should be set to treat them as "large" speakers.

Sub-woofer Volume

Setting the subwoofer volume is important in terms of both overall system balance and the demands of different types of programme material. You may find that material with an emphasis on music works better with a lower subwoofer volume than movie material with an emphasis on "effects". Finding a compromise between the two is a matter of subwoofer volume adjustment in parallel with adjusting its position in the room.

Sub-woofer Location

Broadly speaking, the closer a subwoofer is to the walls of the room (assuming they are solid brick walls) the more bass it will generate in the room (and the lower its volume need be set). Moving the subwoofer closer to the walls however will also tend to reduce the consistency subwoofer volume over the listening room (a corner location being the worst in this respect). Positions closer to the wall with also tend to change the character of the bass produced by the subwoofer - it will emphasise the very lowest signals more. This change in bass character with location is the variable that enables a good compromise position for the subwoofer to be found.

Sub-woofer Phase

Switching the subwoofer phase should be left to last. If a good subwoofer position is proving difficult to find, try again with the phase reversed.

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7. Specifications

Aego-T Satellite

Type: Two-way, closed box compact speaker.

Mid/Bass Driver: 100mm damped fibre cone with 25mm thermally bonded voice coil. Shielded high-power long-throw magnet system.

HF Driver: 25mm Pre-coated textile dome with ferro-fluid cooled neodymium magnet system and rear heat sink.

Filter Network: 2nd and 3rd order at 3.5kHz.

Cabinet: Injection moulded and die-cast aluminium hybrid.

Frequency Response: 100Hz to 20kHz ±3dB

Frequency Range: 75Hz to 30kHz @ -6dB

Power Handling: 100W peak programme

Amplifier Compatibility: 25 - 100 Watts into 8 Ohms

Nominal Impedance: 8 Ohms

Sensitivity: 86.0dB for 1 Watt at 1 metre

Dimensions (H x W x D): 202 x 124 x 146mm

Weight: 2.5kg (single, unpacked)

Aego-T Subwoofer

Type: Closed box, opposed driver active subwoofer.

Drivers: 2 x 200mm fibre cone with 48mm thermally bonded voice coil. Shielded high-power long-throw magnet system.

Low Frequency Cut-off: - 6dB @ 30Hz

Amplifier: 200 Watts into 4 Ohms

Low Pass Filter: 2nd Order at 250Hz

Input Sensitivity: 300mv for rated output

Dimensions (H x W x D): 390 x 360 x 360mm

Weight: 18.5kg (single, unpacked)

Acoustic Energy reserves the right to modify product specifications.

8. Warranty

Your Acoustic Energy speakers are guaranteed against original defects in materials, manufacture and workmanship for one year from the date of purchase.

Under this warranty Acoustic Energy agrees to repair any defect or, at the company's discretion, replace the faulty component(s) without charge for parts or labour. This warranty does not imply any acceptance by Acoustic Energy or its agents for consequential loss or damage and specifically excludes fair wear and tear, accident, misuse or unauthorised modification.

This warranty is applicable in the United Kingdom only and does not in any way limit the customer's legal rights. Claims and enquiries under the warranty for Acoustic Energy products purchased outside the UK should be addressed to the local importers or distributors. If you have reason to claim under the warranty please contact your dealer in the first instance.

Please retain all original packaging materials for possible future use. We suggest that you complete details of purchase now and keep this information in a safe place for future reference.

Name: _____

Address: _____

_____

Dealer: _____

Purchase Date: _____

Serial Numbers: _____

9. Contact Acoustic Energy

Acoustic Energy Limited
16 Bridge Road
Cirencester
Gloucestershire GL7 1NJ
UK

Tel: +44 (0)1285 654432 (Sales)
+44 (0)1285 656890 (Technical)
Fax: +44 (0)1285 654430
Email: info@acoustic-energy.co.uk
Web: www.acoustic-energy.co.uk

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